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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/749,710

12/31/2003

Roland A. Wood

H0001250CIP1(1100.1223101

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12/14/2005

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EXAMINER

GABOR, OTILIA

ART UNIT

PAPER NUMBER

2884

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/749,710

Applicant(s)

WOOD ET AL.

Examiner

Otilia Gabor

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>07/12/04</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-34 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Cole et al. (U. S. Patent 5,550,373).

Cole discloses an adaptive sensor and means for detecting light using the adaptive sensor, where the sensor comprises: a plurality of detectors (14) and a plurality of adjustable filters (74) proximate to the plurality of detectors (14) (see especially Fig.4).

Regarding claim 16 Cole discloses that the means of detecting comprises a detector for detecting light; a means for filtering light proximate to the means for detecting light, where the filtering means has an adjustable bandpass (see Col.3, lines 52-65).

Regarding claims 21, 22 Cole discloses a method for detecting comprising the step of providing a detector; placing a filter proximate to the detector and adjusting the filter to a desired wavelength; and directing the filter and the detector towards a target.

Regarding claim 24, 25, 26 Cole discloses an array of detectors (14); an array of tunable etalons, where each etalon is independently tunable to provide a narrow and broad band transmittance of light to a detector of the array (14).

Regarding claims 2, 7 Cole discloses that the filters are Fabry-Perot bandpass filters.

Regarding claims 3-5, 17 Cole discloses a plurality of electrostatic actuators (26) connected to the adjustable filters, which filters are adjusted by the actuators.

Regarding claim 6 Cole discloses that the plurality of detectors is a bolometer.

Regarding claims 8, 20 Cole discloses that the filters, actuators, and detectors are situated in a package (see Figures).

Regarding claims 9-11, 29, 31 Cole discloses that the plurality of detectors are situated on a first wafer (chip) (12) and that the adjustable filters or etalons are situated on a second wafer (chip) (32), where the second wafer (chip) (32) is a topcap situated on the first wafer, thereby enclosing the plurality of detectors and filters (see Fig.4) and so that the etalon is aligned with the detector.

Regarding claim 12 Cole discloses that the first and second wafers form an integrated vacuum package (see Col.2, lines 30-60).

Regarding claims 13, 14, 18, 19, 23, 27, 28 Cole discloses that each filter may be adjusted to pass a narrow (2.5-5.5 micrometers) or a broad band (8-12 micrometers) of light.

Regarding claim 15 Cole discloses that the second wafer can contain an IR transmissive window (32).

Regarding claim 30 Cole discloses that the detectors form an array of bolometers, that the etalons are Fabry-Perot etalons, and the actuators are electrostatic actuators.

Regarding claim 32 Cole discloses that the integrated package is sealed from the ambient environment (vacuum sealed).

Regarding claims 33 and 34 Cole discloses a die-to-die or a wafer-to-wafer bonding of the wafers (chips) (see Col.5, lines 60-68, Col.6, lines 54-67).

3. Claims 1, 2, 16, 21 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Harling et al. (U. S. Patent 6,222,454).

Harling discloses an adaptive sensor comprising a plurality of detectors (21a, 21b) and a plurality of adjustable bandpass filters (21a, 51b) proximate to the plurality of detectors (see Figs.2, 6 and corresponding description). The method of detecting includes providing a detector, placing the filter proximate to the detector, adjusting the filter to a desired wavelength and directing the filter and detector toward a target.

**Conclusion**

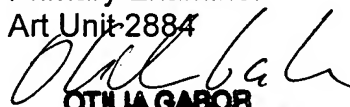
4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Otilia Gabor whose telephone number is 571-272-2435. The examiner can normally be reached on Monday-Friday between 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Otilia Gabor  
Primary Examiner  
Art Unit 2884



**OTILIA GABOR**  
**PRIMARY EXAMINER**